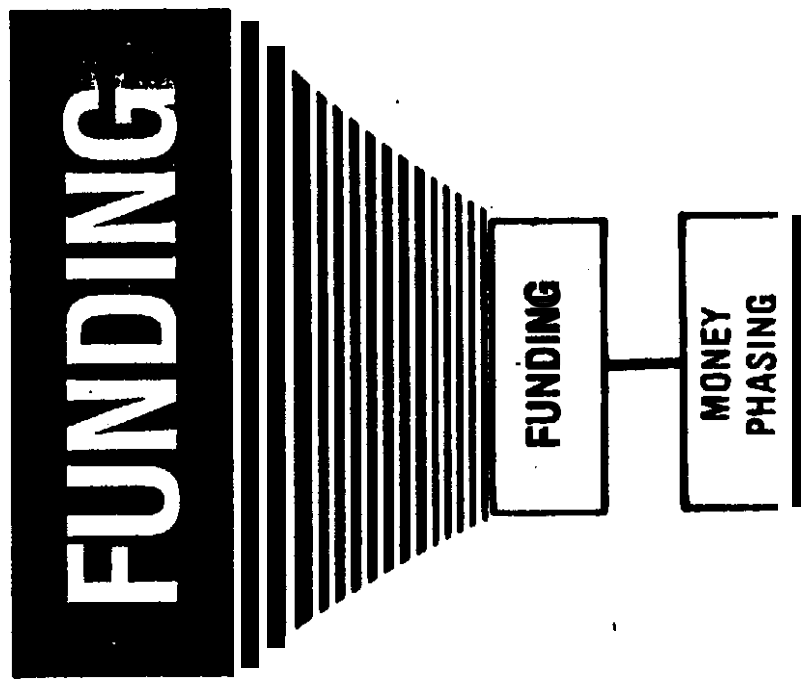
# CHAPTER 2



# CHAPTER 2

## INTRODUCTION FOR FUNDING CRITICAL PATH TEMPLATE

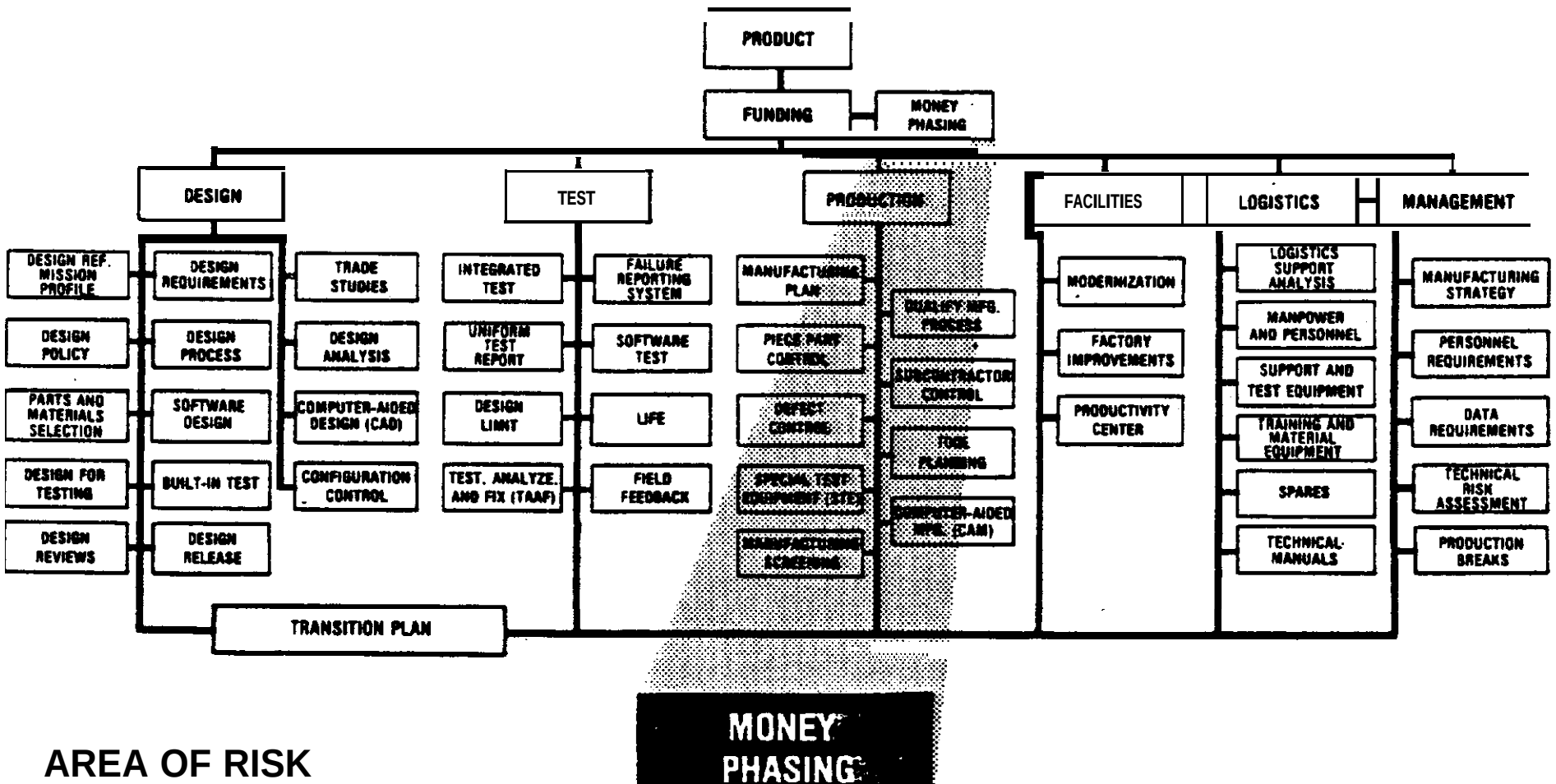
Over the years, the Department of Defense and the Military Services have been struggling to improve the acquisition process. There has been a seemingly endless proliferation of "blue ribbon" panels, ad hoc reviews, summer studies, task forces, and audits, whose memberships consisted of the most respected representatives of Government and industry. Many of these efforts were mandated congressionally, but the increasing congressional focus (General Accounting Office (GAO) reports and staff member inquiries) on DoD acquisition programs indicates that Congress is not convinced that the overall objective, namely, "more bang for the buck," is being accomplished.

There is no doubt that past studies and reviews have provided many practical recommendations and those that were acted upon helped formulate current procedures for the DSARC process and the PPBS. Yet, there is still concern whether the taxpayer's money is being well spent and whether our Armed Forces are **being provided equipment** that works when needed. Why do we have so many cost overruns and why does our operating equipment fail so frequently?

The answers are not simple. Some of the more lofty answers pertain to the increasing complexity of our hardware, greater administrative reporting burdens, changes in administration policy from one election to the next, and variations in the level of our international military commitment as it influences and is influenced by the existing attitude of the American public.

However, there are at least three answers that are not so lofty and over which we can exert significant control. One relates to the need for more discipline in the technical side of the acquisition process, that is, more attention to the engineering fundamentals of design, test, production, and supportability; this answer is the basic purpose of this Manual and is well described in the Preface and Introduction. A second answer involves the critical resource of personnel" and is discussed in a separate template in the Management section. The third answer is sound funding policy. In order to avoid "biting off more than we can chew," and because there are many facets to funding policy concerns, the following template on money phasing is confined to research, development, test, and evaluation (RDT&E), and initial production funding.

# TEMPLATE




**AREA OF RISK**

MONEY PHASING

Inadequate RDT&E **funding is, of course, an obvious major risk area. Aside from this "quantity" issue, however, there are the other funding risk areas that deal with the** *phasing* **of money: (1) inadequate** *early* **RDT&E funds, and (2) inadequate** *early* **production funds during the latter phases of development (initial production funds (IPF) and long lead). Risk is aggravated by authorizing development without production in mind.** *The development decision is a commitment to production* **that must be supported by properly phased funding.**

**OUTLINE FOR REDUCING RISK**

- **If the all-important design and engineering effort is to be funded adequately, provide a reasonable proportion of total RDT&E funds in the eady years. Figure 2-1. is a representation of an idealized RDT&E funding profile.**

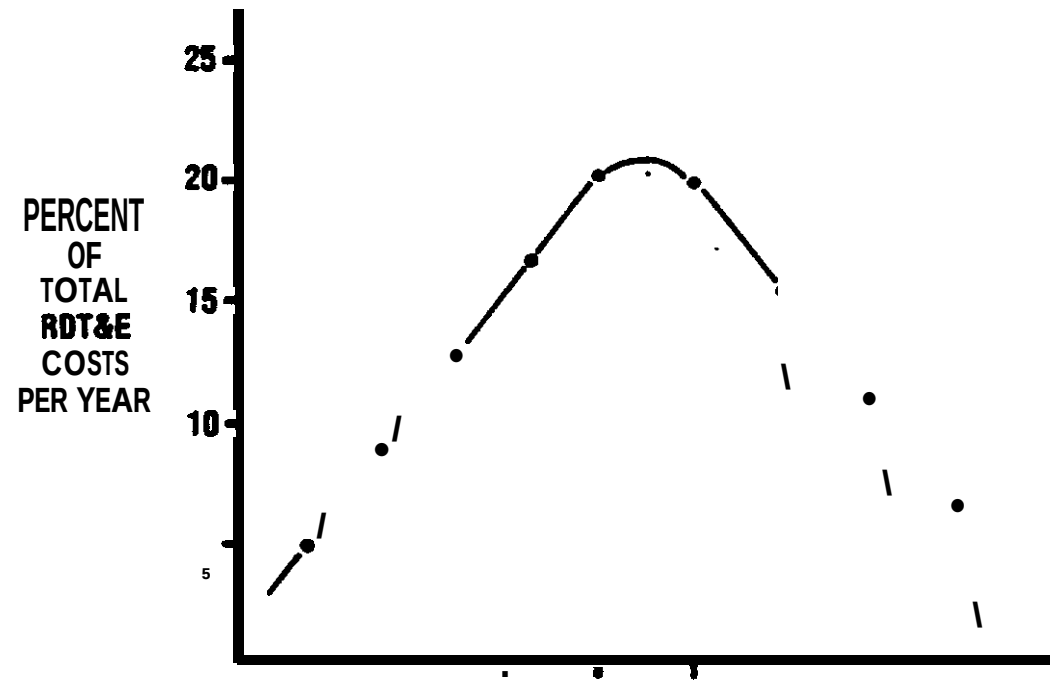



**Figure 2-1. What We Should Do (RDT&E Funding Profile)**

Rarely, however, are funds provided on this type of schedule. Early dollars are hard to find and the profile shown in figure 2-2. is a much more typical situation. This condition is aggravated when programs are started on short notice.

A significant initial subset of this profile is the RDT&E funding spent on production preparations. If this funding profile is changed, the impact on transition must be assessed.

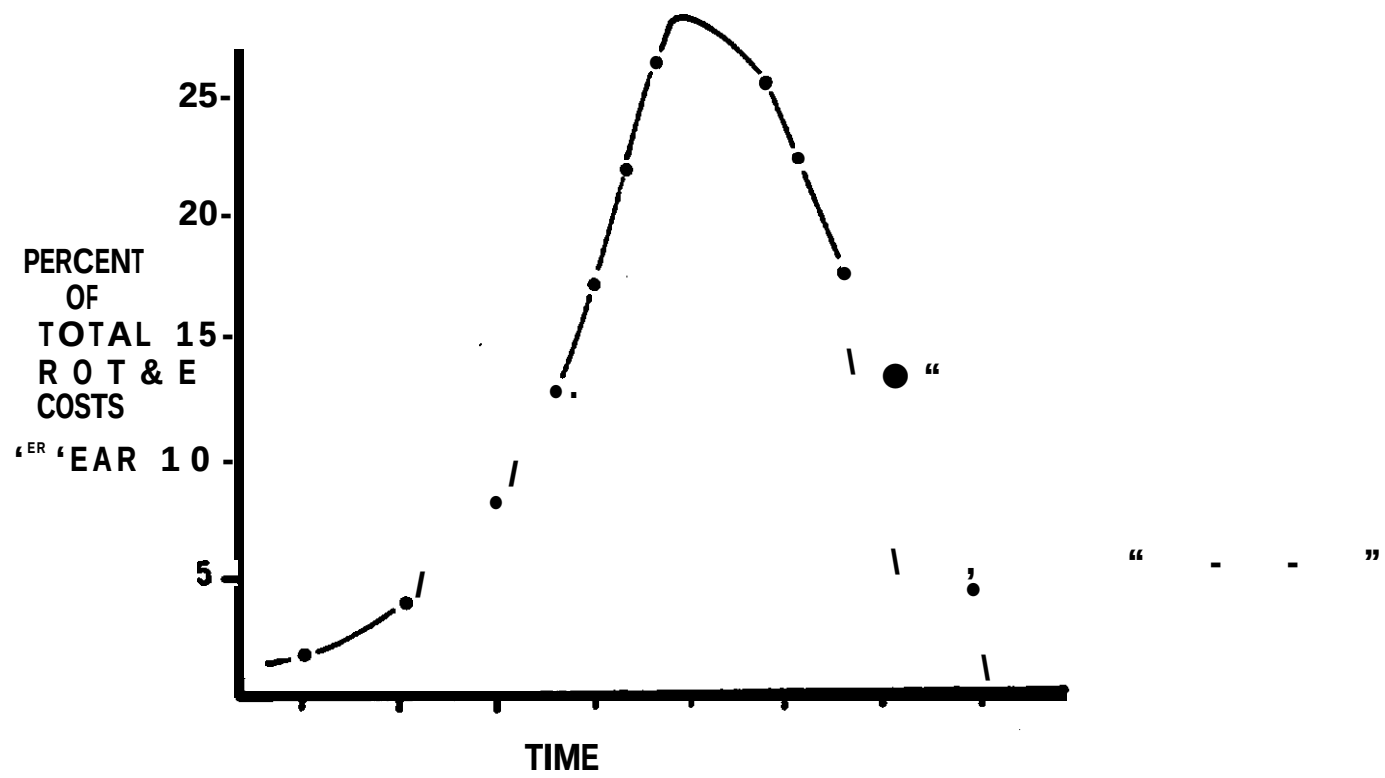



Figure 2-2. What We Do (RDT&E Funding Profile)

Figure 2-3. combines these *idealized* and *actual* funding profiles, and the shaded area represents a “design and engineering gap” from which the program cannot recover by application of later funds.

The first type of funding risk, therefore, can be ascertained by comparison of a program’s funding profile with those of figures 2-1. and 2-2.

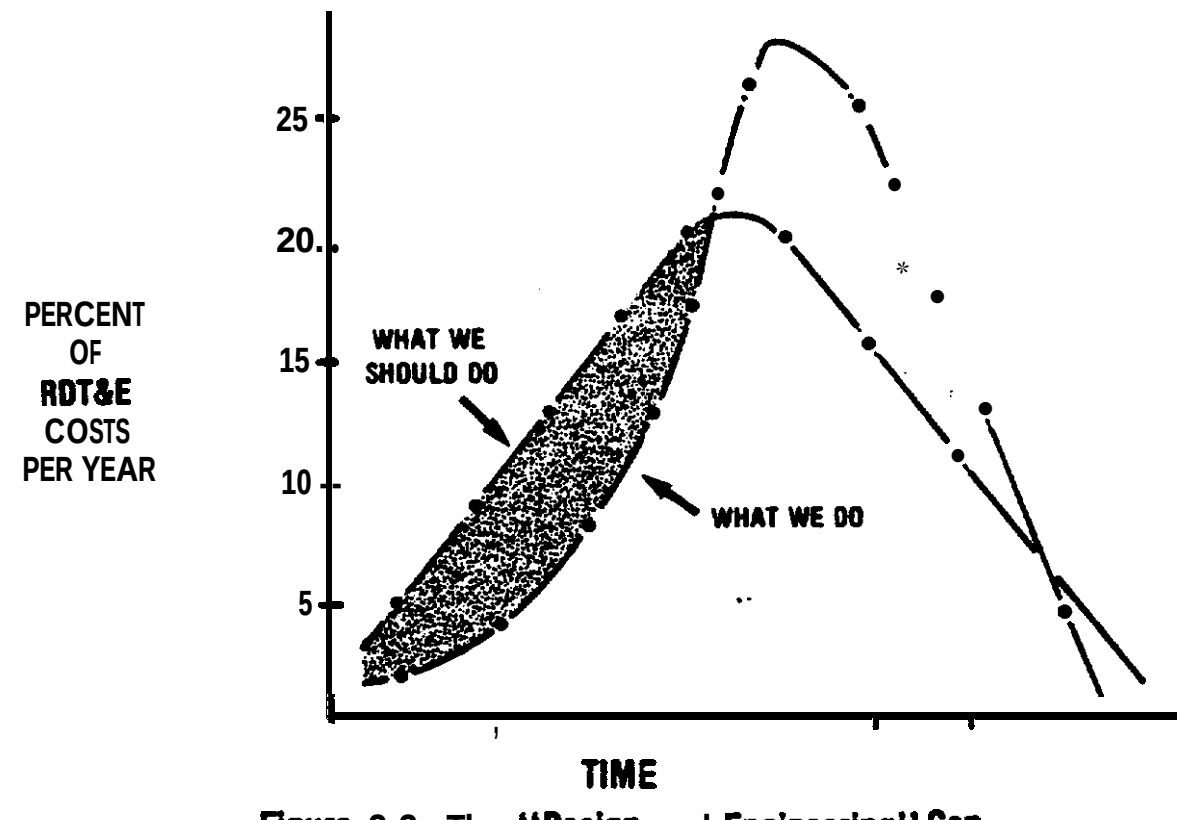



Figure 2-3. The “Design and Engineering” Gap

- The second type of risk reduction involves the early commitment of production funds-while development is still ongoing-for tooling, long lead materials, and production line startup. Figure 2-4. shows a graphic representation of the needed buildup of production funds during RDT&E phase down. The "fly before buy" school of acquisition policy tends to drive to the "too late" line. Excessive concurrency can result in unwise commitments indicated by the "too early" line. For all programs there will be an optimum middle ground that results in. low RDT&E risk and a controlled "transition to production" (shaded area).

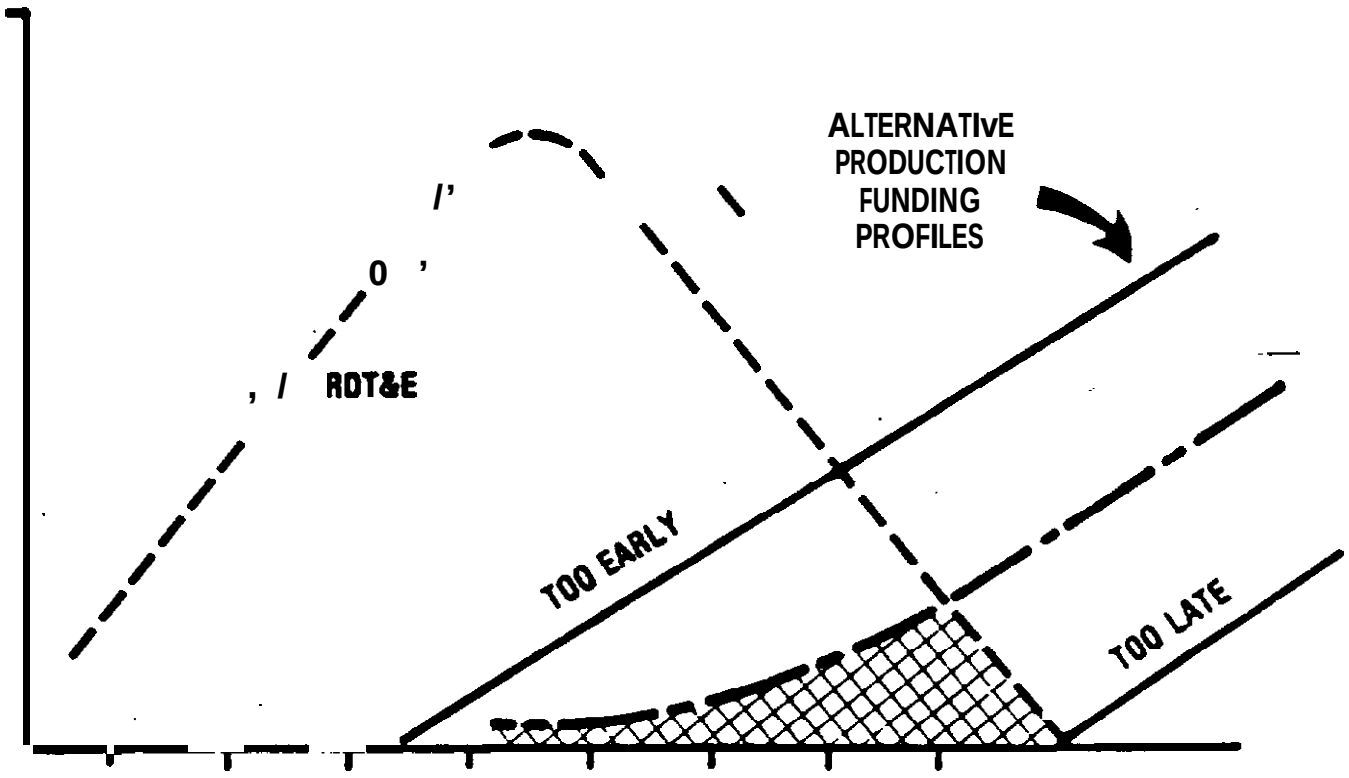
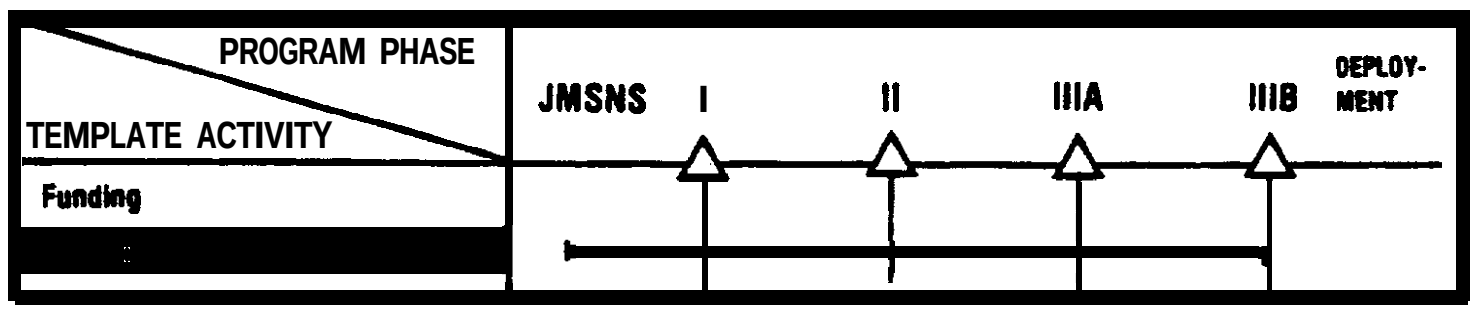



Figure 2-4. Funding Profiles (RDT&E and Production)

## TIMELINE




Early availability of enough funding from the RDT&E and procurement appropriations is essential for a smooth transition from development to production and early deployment. The proper focus must continue during each annual budget cycle. Without a proper funding profile, it will be impossible to keep the program in technical balance.